



2005 Minerals Yearbook

MINING AND QUARRYING TRENDS

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Domestic survey data were prepared by the author and each of the statistical assistants who has responsibility for the mineral commodities indicated.

The mining and quarrying trends shown in this report were calculated from nonfuel mineral data reported to the U.S. Geological Survey (USGS) by mining and quarrying companies operating in the United States. The data for 2005 were reported on the “Mine, Development, and Mineral Exploration Supplement” statistical survey conducted by the USGS and on the production surveys for some more widely produced nonfuel mineral commodities, such as sand and gravel. Additional data for 2005 were derived from annual USGS production and consumption surveys of nonfuel mineral producers; these surveys covered 58 nonfuel mineral commodities produced in the United States. Nonfuel minerals exclude coal, petroleum coke, and related products.

The data in the following tables are reported according to the primary product of a mine or operation; a product of lesser value is considered to be a byproduct. The primary product is the product with the highest total value for the year. In some instances, the values of two products at the same operation are so similar that the products are coproducts.

Total domestic mining and waste removal for nonfuel mineral materials production amounted to 6.0 billion metric tons (Gt) in 2005, a 2% increase compared with that of 2004. These materials included 4.5 Gt of crude ore mined or quarried and 1.4 Gt of mine ore and waste from development operations. Of the nonfuel mineral materials mined, 62% was for the production of

industrial minerals, and 38% was for the production of metals. Overall, 97% of nonfuel minerals was mined and quarried using surface methods, and 3% was mined underground.

Total surface mining, quarrying, and waste removal for industrial minerals production amounted to 3.5 Gt, a 4% increase compared with the revised figure for 2004. Crude ore mined at these surface operations was 3.2 Gt, and 369 million metric tons (Mt) was ore and waste from development operations. Underground mining for industrial minerals was only 138 Mt, nearly all of which was crude ore.

Total surface mining and waste removal for metal ores amounted to 2.3 Gt, about the same level as that of 2004. Of the 2.3 Gt, 1.2 Gt was crude ore mined, and 1.1 Gt was ore and waste from development operations. Underground mining of metal ores amounted to only 20 Mt, of which 95% was crude ore.

The major States in which mining for nonfuel minerals took place, in order of total material handled, were Nevada, Arizona, Florida, Minnesota, California, Texas, Michigan, Utah, Ohio, and Pennsylvania. These 10 States accounted for 60% of the tonnage removed in the production of nonfuel minerals mined in the United States. Nearly all nonfuel mine production in these States was from surface operations.

TABLE 1
MATERIAL HANDLED AT SURFACE AND UNDERGROUND MINES IN THE UNITED STATES, BY TYPE¹

(Million metric tons)

Type of ore and year	Surface ²			Underground ³			All mines		
	Crude ore	Waste ⁴	Total	Crude ore	Waste ⁴	Total	Crude ore	Waste ⁴	Total
Metals:									
2001	1,080	1,120	2,200	17	3	20	1,100	1,120	2,220
2002	1,060	1,020	2,080	15	3	18	1,070	1,020	2,090
2003	1,080 ^r	1,020	2,090 ^r	14	1	15	1,090 ^r	1,020	2,110 ^r
2004	1,190 ^r	1,060	2,250 ^r	14	2	16	1,200 ^r	1,060	2,260 ^r
2005	1,210	1,050	2,260	19	1	20	1,230	1,050	2,280
Industrial minerals:									
2001	2,840	358	3,200	114	(5)	114	2,960	358	3,310
2002	2,850	442	3,290	108	(5)	108	2,960	442	3,400
2003	2,900	416	3,310	107	(5)	107	3,000	416	3,420
2004	3,000 ^r	409	3,410 ^r	139 ^r	(5)	139 ^r	3,140 ^r	409	3,550 ^r
2005	3,160	369	3,530	137	1	138	3,300	370	3,670
All mineral commodities:									
2001	3,920	1,480	5,400	131	4	135	4,050	1,480	5,530
2002	3,910	1,460	5,370	123	3	126	4,030	1,460	5,490
2003	3,980 ^r	1,430	5,410 ^r	121	2	123	4,100 ^r	1,430	5,530 ^r
2004	4,190 ^r	1,470	5,650 ^r	153 ^r	2	155 ^r	4,340 ^r	1,470	5,810 ^r
2005	4,380	1,420	5,790	156	2	158	4,530	1,420	5,950

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes materials from wells, ponds, and pumping operations.

³Includes solution mining.

⁴Includes ore and waste from development operations.

⁵Less than ½ unit.

TABLE 2
MATERIAL HANDLED AT SURFACE AND UNDERGROUND MINES IN THE UNITED STATES IN 2005, BY COMMODITY AND STATE¹

Commodity or State	Number of mines ²	Surface ³			Underground ⁵			All mines		
		Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)	Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)	Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)
Commodity:										
Metal ore:	44	226,000	774,000	1,000,000	4,860	1,030	5,900	231,000	775,000	1,010,000
Gold	9	176,000	155,000	331,000	--	--	--	176,000	155,000	331,000
Iron	43	813,000	120,000	933,000	13,900	383	14,200	826,000	121,000	947,000
Other ⁶	96	1,210,000	1,050,000	2,260,000	18,700	1,420	20,100	1,230,000	1,050,000	2,280,000
Total										
Industrial minerals:	5	742	W	742 ⁷	--	--	--	742	W	742 ⁷
Barite	638	41,700	36,300	78,000	--	--	--	41,700	36,300	78,000
Clays	11	653	W	653 ⁷	--	--	--	653	W	653 ⁷
Diatomite	12	1,450	--	1,450	--	--	--	1,450	--	1,450
Feldspar ⁸	45	19,300	3,020	22,300	1,850	--	1,850	21,100	3,020	24,100
Gypsum	15	151,000	W	151,000 ⁷	--	--	--	151,000	W	151,000 ⁷
Phosphate rock	16	1,270	717	1,990	--	--	--	1,270	717	1,990
Pumice ⁹	67	7,120	--	7,120	34,200	--	34,200	41,300	--	41,300
Salt										
Sand and gravel:	9,975	1,270,000	--	1,270,000	--	--	--	1,270,000	--	1,270,000
Construction	136	29,900	--	29,900	W	--	W	29,900 ¹⁰	--	29,900 ¹⁰
Industrial	6	--	--	--	11,000	--	11,000	11,000	--	11,000
Soda ash										
Stone:	3,171	1,610,000	126,000	1,730,000	77,200	535	77,700	1,690,000	127,000	1,810,000
Crushed	154	1,510	W	1,510 ⁷	W	--	W	1,510 ¹⁰	W	1,510 ^{7, 10}
Dimension	13	661	2,430	3,090	--	--	--	661	2,430	3,090
Talc and pyrophyllite	85	23,700	200,000	224,000	13,100	--	13,100	36,800	200,000	237,000
Other ¹¹	14,349	3,160,000	369,000	3,530,000	137,000	535	138,000	3,300,000	370,000	3,670,000
Total	14,445	4,380,000	1,420,000	5,790,000	156,000	1,950	158,000	4,530,000	1,420,000	5,950,000
Grand total										
State:										
Alabama	188	66,700	6,040	72,700	W	W	W	66,700 ¹⁰	6,040 ¹⁰	72,700 ¹⁰
Alaska	175	25,800	41,900	67,800	W	W	W	25,800 ¹⁰	41,900 ¹⁰	67,800 ¹⁰
Arizona	430	499,000	97,200	596,000	--	--	--	499,000	97,200	596,000
Arkansas	141	47,800	5,930	53,700	W	--	W	47,800 ¹⁰	5,930	53,700 ¹⁰
California	853	226,000	W	226,000 ⁷	W	W	W	226,000 ¹⁰	W	226,000 ^{7, 10}
Colorado	412	76,100	30,700	107,000	W	W	W	76,100 ¹⁰	30,700 ¹⁰	107,000 ¹⁰
Connecticut	98	18,300	881	19,200	--	--	--	18,300	881	19,200
Delaware	14	3,790	W	3,790 ⁷	--	--	--	3,790	W	3,790 ⁷
Florida	193	283,000	W	283,000 ⁷	--	--	--	283,000	W	283,000 ⁷
Georgia	242	98,900	15,200	114,000	1,450	10	1,460	100,000	15,200	116,000
Hawaii	31	7,560	493	8,060	--	--	--	7,560	493	8,060
Idaho	380	37,500	W	37,500 ⁷	W	W	W	37,500 ¹⁰	W	37,500 ^{7, 10}
Illinois	274	114,000	5,940	120,000	4,850	34	4,890	118,000	5,970	124,000
Indiana	261	83,200	5,220	88,400	3,040	17	3,060	86,200	5,240	91,500
Iowa	388	50,800	3,000	53,800	5,730	33	5,770	56,500	3,040	59,600
Kansas	364	32,900	2,310	35,200	3,120	4	3,120	36,000	2,310	38,300
Kentucky	128	48,300	3,930	52,200	22,600	158	22,800	70,900	4,090	75,000
Louisiana	147	27,500	980	28,500	13,400	--	13,400	40,900	980	41,900
Maine	197	15,100	405	15,500	--	--	--	15,100	405	15,500
Maryland	86	45,500	2,920	48,400	W	W	W	45,500 ¹⁰	2,920 ¹⁰	48,400 ¹⁰
Massachusetts	142	29,400	1,130	30,500	--	--	--	29,400	1,130	30,500
Michigan	559	141,000	W	141,000 ⁷	1,920	--	1,920	143,000	W	143,000 ⁷
Minnesota	614	203,000	121,000	324,000	--	--	--	203,000	121,000	324,000
Mississippi	120	19,200	1,390	20,600	W	W	W	19,200 ¹⁰	1,390 ¹⁰	20,600 ¹⁰
Missouri	291	84,700	6,910	91,600	W	W	W	84,700 ¹⁰	6,910 ¹⁰	91,600 ¹⁰
Montana	273	40,800	W	40,800 ⁷	1,800	W	1,800 ⁷	42,600	W	42,600 ⁷
Nebraska	174	19,100	519	19,600	W	W	W	19,100 ¹⁰	519 ¹⁰	19,600 ¹⁰
Nevada	895	504,000	601,000	1,100,000	W	W	W	504,000 ¹⁰	601,000 ¹⁰	1,100,000 ¹⁰
New Hampshire	99	13,500	425	13,900	--	--	--	13,500	425	13,900

See footnotes at end of table.

TABLE 2—Continued
MATERIAL HANDLED AT SURFACE AND UNDERGROUND MINES IN THE UNITED STATES IN 2005, BY COMMODITY AND STATE¹

Commodity or State	Number of mines ²	Surface ³			Underground ⁵			All mines		
		Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)	Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)	Crude ore (thousand metric tons)	Waste ⁴ (thousand metric tons)	Total (thousand metric tons)
State—Continued:										
New Jersey	95	45,800	1,890	47,700	--	--	--	45,800	1,890	47,700
New Mexico	536	54,800	W	54,800 ⁷	12,200	--	12,200	67,100	W	67,100 ⁷
New York	625	83,400	4,970	88,400	6,770	W	6,770 ⁷	90,200	4,970 ¹⁰	95,200 ^{7, 10}
North Carolina	241	97,100	10,900	108,000	--	--	--	97,100	10,900	108,000
North Dakota	172	11,400	W	11,400 ⁷	--	--	--	11,400	W	11,400 ⁷
Ohio	380	128,000	7,080	136,000	W	--	W	128,000 ¹⁰	7,080	136,000 ¹⁰
Oklahoma	163	63,000	4,380	67,400	W	W	W	63,000 ¹⁰	4,380 ¹⁰	67,400 ¹⁰
Oregon	311	48,000	2,640	50,600	--	--	--	48,000	2,640	50,600
Pennsylvania	341	116,000	8,420	124,000	3,670	26	3,690	119,000	8,450	128,000
Rhode Island	28	4,310	129	4,440	--	--	--	4,310	129	4,440
South Carolina	116	48,000	4,040	52,000	--	--	--	48,000	4,040	52,000
South Dakota	256	21,600	15,800	37,500	--	--	--	21,600	15,800	37,500
Tennessee	201	68,700	5,770	74,500	3,020	W	3,020 ⁷	71,700	5,770 ¹⁰	77,500 ^{7, 10}
Texas	504	219,000	13,300	233,000	5,120	W	5,120 ⁷	224,000	13,300 ¹⁰	238,000 ^{7, 10}
Utah	391	94,500	W	94,500 ⁷	631	W	631 ⁷	95,200	W	95,200 ⁷
Vermont	111	10,700	472	11,200	--	--	--	10,700	472	11,200
Virginia	204	99,000	8,280	107,000	W	W	W	99,000 ¹⁰	8,280 ¹⁰	107,000 ¹⁰
Washington	332	60,300	1,180	61,500	W	--	W	60,300 ¹⁰	1,180	61,500 ¹⁰
West Virginia	49	13,200	1,150	14,400	2,750	W	2,750 ⁷	16,000	1,150 ¹⁰	17,100
Wisconsin	713	84,100	3,240	87,400	W	W	W	84,100 ¹⁰	3,240 ¹⁰	87,400 ¹⁰
Wyoming	507	23,300	4,260	27,500	9,930	--	9,930	33,200	4,260	37,400
Undistributed ¹²	--	118,000	364,000	482,000	53,900	1,670	55,500	172,000	366,000	538,000
Total	14,445	4,380,000	1,420,000	5,790,000	156,000	1,950	158,000	4,530,000	1,420,000	5,950,000

W Withheld to avoid disclosing company proprietary data; included with "Other" or "Undistributed." -- Zero.

¹Data are rounded to no more than three significant digits except "number of mines"; may not add to totals shown.

²Includes quarries and other mineral operations.

³Includes materials from wells, ponds, and pumping operations.

⁴Includes ore and waste from development operations.

⁵Includes solution mining.

⁶Includes beryllium, copper, gold-silver, lead, lead-zinc, magnesium metal, molybdenum, platinum and palladium, silver, titanium, uranium, and zinc.

⁷Excludes waste from mining operations and ore and waste from development operations.

⁸Includes aplite.

⁹Excludes volcanic cinder and scoria; included with "Crushed stone."

¹⁰Excludes materials from underground operations.

¹¹Includes abrasives, boron minerals, bromine, garnet, greensand marl, iodine, iron oxide pigments, kyanite, lithium minerals, magnesite, magnesium compounds, mica, olivine, perlite, potash, tripoli, vermiculite, wollastonite, zeolites, and industrial minerals indicated by symbol W.

¹²Includes States indicated by symbol W.

TABLE 3
VALUE OF PRINCIPAL MINERAL PRODUCTS AND BYPRODUCTS OF SURFACE AND UNDERGROUND MINES IN THE UNITED STATES IN 2005¹

(Dollars per metric ton)

Commodity	Surface			Underground			All mines		
	Principal mineral product	Byproduct	Total	Principal mineral product	Byproduct	Total	Principal mineral product	Byproduct	Total
Metal ore:									
Gold	13.88	1.10	14.98	W	W	W	13.88 ²	1.10 ²	14.98 ²
Iron	18.32	--	18.32	--	--	--	18.32	--	18.32
Average, metals ³	11.82	0.97	12.79	60.89	16.91	77.80	12.82	1.29	14.11
Industrial minerals:									
Barite	28.28	--	28.28	--	--	--	28.28	--	28.28
Clays	39.66	--	39.66	--	--	--	39.66	--	39.66
Feldspar ⁴	25.90	W	25.90 ⁵	--	--	--	25.90	W	25.90 ⁵
Gypsum	6.93	--	6.93	9.45	--	9.45	7.26	--	7.26
Phosphate rock	7.06	--	7.06	--	--	--	7.06	--	7.06
Pumice ⁶	27.80	--	27.80	--	--	--	27.80	--	27.80
Salt	72.05	--	72.05	19.13	--	19.13	27.21	--	27.21
Sand and gravel:									
Construction	5.86	--	5.86	--	--	--	5.86	--	5.86
Industrial	24.79	--	24.79	W	--	W	24.79 ²	--	24.79 ²
Soda ash	--	--	--	88.39	--	88.39	88.39	--	88.39
Stone:									
Crushed	7.16	--	7.16	7.63	--	7.63	7.18	--	7.18
Dimension	177.89	--	177.89	W	--	W	177.89 ²	--	177.89 ²
Talc and pyrophyllite	30.81	--	30.81	--	--	--	30.81	--	30.81 ²
Average, industrial minerals ⁷	7.88	0.02	7.90	19.31	--	19.31	8.38	0.02	8.40
Average, industrial minerals, excluding sand and gravel and stone ⁷	20.84	0.21	21.05	33.06	--	33.06	23.53	0.16	23.69
Average, metals and industrial minerals ^{3, 7}	8.76	0.23	8.99	24.17	1.98	26.15	9.35	0.30	9.65
Average, metals and industrial minerals, excluding sand and gravel and stone ^{3, 7}	13.65	0.81	14.46	39.33	3.81	43.14	15.41	1.02	16.43

W Withheld to avoid disclosing company proprietary data; included in appropriate "Average." -- Zero.

¹Values calculated from unrounded data; may not add to totals shown because of independent rounding.

²Value of products at surface operations only.

³Includes values of beryllium, copper, gold-silver, lead, lead-zinc, magnesium metal, molybdenum, platinum and palladium, silver, titanium, zinc, and metals indicated by symbol W.

⁴Includes aplite.

⁵Value of principal mineral product only.

⁶Excludes volcanic cinder and scoria; included with "Crushed stone."

⁷Includes values of abrasives, boron minerals, bromine, diatomite, garnet, greensand marl, iodine, iron oxide pigments, kyanite, lithium minerals, magnesite, magnesium compounds, mica, olivine, perlite, potash, tripoli, vermiculite, wollastonite, zeolites, and industrial minerals indicated by symbol W.

TABLE 4
 TWENTY-FIVE LEADING METAL AND INDUSTRIAL MINERAL MINES AND QUARRIES IN THE UNITED STATES IN 2005,
 IN ORDER OF OUTPUT OF CRUDE ORE¹

Name of mine, quarry or operation ²	State	Operator	Commodity	Mining method
Metal:				
Morenci	Arizona	Phelps Dodge Corp.	Copper	Open pit.
Newmont Nevada operations ³	Nevada	Newmont Mining Corporation	Gold	Open pit and stoping.
Betz-Post	do.	Barrick Gold Corporation	do.	Open pit and underground.
Chino	New Mexico	Phelps Dodge Corp.	Copper-molybdenum	Open pit.
Bagdad	Arizona	do.	do.	Do.
Sierrita	do.	do.	do.	Do.
Minnpac	Minnesota	United States Steel Corporation	Iron ore	Do.
Bingham Canyon	Utah	Kennecott Utah Copper Corp.	Copper-molybdenum	Do.
Marigold	Nevada	Glamis Gold Ltd.	Gold	Do.
Ray	Arizona	ASARCO Incorporated	Copper	Do.
Cortez	Nevada	Placer Dome Inc.	Gold	Do.
Hibbing Taconite	Minnesota	Cleveland-Cliffs Inc	Iron ore	Do.
Round Mountain	Nevada	Round Mountain Gold Corp.	Gold	Do.
Tyrone	New Mexico	Phelps Dodge Corp.	Copper	Do.
Tilden	Michigan	Cleveland-Cliffs Inc	Iron ore	Do.
Keewatin Taconite	Minnesota	United States Steel Corporation	do.	Do.
Cresson	Colorado	Cripple Creek & Victor Gold Mining Co.	Gold	Do.
Empire	Michigan	Cleveland-Cliffs Inc	Iron ore	Do.
Continental Pit	Montana	Montana Resources	Copper-molybdenum	Do.
United Taconite	Minnesota	Cleveland-Cliffs Inc	Iron ore	Do.
Northshore	do.	do.	do.	Do.
Robinson	Nevada	Quadra Mining Ltd.	Copper-molybdenum	Do.
Fort Knox	Alaska	Kinross Gold Corporation	Gold	Do.
Mission Complex	Arizona	ASARCO Incorporated	Copper	Do.
Minorca	Minnesota	Mittal Steel Corporation	Iron ore	Do.
Industrial mineral:				
Florida mines (seven)	Florida	The Mosaic Company	Phosphate rock	Do.
South Pasture	do.	CF Industries, Inc.	do.	Do.
Swift Creek	do.	PCS Phosphate Co., Inc.	do.	Do.
White Rock	do.	Vecellio & Grogan, Inc.	Stone, crushed	Quarry.
F.E.C. Quarry	do.	Rinker Materials Corporation	do.	Do.
Aurora	North Carolina	PCS Phosphate Co., Inc.	Phosphate rock	Open pit.
Georgetown	Texas	Texas Crushed Stone Co., Inc.	Stone, crushed	Quarry.
Balcones Plant	do.	Cemex, Inc.	do.	Do.
Pennsuko Quarry	Florida	Titan Atlantic LLC	do.	Do.
McCook 378	Illinois	Vulcan Materials Co.	do.	Do.
Mosaic Potash Carlsbad	New Mexico	The Mosaic Company	Potash	Stoping.
Alico Quarry	Florida	Rinker Materials Corporation	Stone, crushed	Quarry.
Thornton Quarry	Illinois	Material Service Corporation	do.	Do.
Ste. Genevieve Quarry	Missouri	Tower Rock Stone Co.	do.	Do.
Stoneport Quarry	Michigan	Lafarge North America, Inc.	do.	Do.
Great Salt Lake Plant	Utah	Great Salt Lake Minerals Corporation	Potash	Pumping/solar evaporation.
OMYA California, Inc.	California	OMYA Industries, Inc.	Stone, crushed	Quarry.
Servtex	Texas	Hanson Building Materials America	do.	Do.
Dupont Pit	Washington	California Portland Cement Co.	Sand and gravel, construction	Open pit.
TXI Mill Creek Quarry	Oklahoma	Texas Industries, Inc.	Stone, crushed	Quarry.
Krome Quarry	Florida	Rinker Materials Corporation	do.	Do.
Hunter Quarry	Texas	Colorado Materials, Ltd.	do.	Do.
PBA Quarry	Florida	Palm Beach Aggregates, Inc.	do.	Do.
Port Inland	Michigan	O-N Minerals Co.	do.	Do.
Macon Quarry	Georgia	Rinker Materials Corporation	do.	Do.

¹List includes private-sector operations only; excludes U.S. Bureau of Land Management and U.S. Forest Service operations.

²Where data are not reported for individual mining operations, ranking is on the basis of production as reported for a group of operations.

³Includes Carlin Mines complex, Lone Tree complex, Midas Mine, Twin Creeks Mine, and Turquoise Ridge Mine; ore was mined from 13 open pits and 4 underground mines.

TABLE 5
 TWENTY-FIVE LEADING METAL AND INDUSTRIAL MINERAL MINES AND QUARRIES IN THE UNITED STATES IN 2005,
 IN ORDER OF OUTPUT OF TOTAL MATERIAL HANDLED¹

Name of mine, quarry or operation ²	State	Operator	Commodity	Mining method
Metal:				
Betze-Post	Nevada	Barrick Gold Corporation	Gold	Open pit and underground.
Newmont Nevada operations ³	do.	Newmont Mining Corporation	do.	Open pit and stoping.
Morenci	Arizona	Phelps Dodge Corp.	Copper	Open pit.
Bingham Canyon	Utah	Kennecott Utah Copper Corp.	Copper-molybdenum	Do.
Bagdad	Arizona	Phelps Dodge Corp.	do.	Do.
Minttac	Minnesota	United States Steel Corporation	Iron ore	Do.
Marigold	Nevada	Glamis Gold Ltd.	Gold	Do.
Hibbing Taconite	Minnesota	Cleveland-Cliffs Inc	Iron ore	Do.
Ray	Arizona	ASARCO Incorporated	Copper	Do.
Robinson	Nevada	Quadra Mining Ltd.	Copper-molybdenum	Do.
Chino	New Mexico	Phelps Dodge Corp.	do.	Do.
Sierrita	Arizona	do.	do.	Do.
Cortez	Nevada	Placer Dome Inc.	Gold	Do.
Fort Knox	Alaska	Kinross Gold Corporation	do.	Do.
Cresson	Colorado	Cripple Creek & Victor Gold Mining Co.	do.	Do.
Round Mountain	Nevada	Round Mountain Gold Corp.	do.	Do.
Tilden	Michigan	Cleveland-Cliffs Inc	Iron ore	Do.
Mission Complex	Arizona	ASARCO Incorporated	Copper	Do.
Keewatin Taconite	Minnesota	United States Steel Corporation	Iron ore	Do.
Empire	Michigan	Cleveland-Cliffs Inc	do.	Do.
Golden Sunlight	Montana	Placer Dome Inc.	Gold	Do.
United Taconite	Minnesota	Cleveland-Cliffs Inc	Iron ore	Do.
Tyrone	New Mexico	Phelps Dodge Corp.	Copper	Do.
Northshore	Minnesota	Cleveland-Cliffs Inc	Iron ore	Do.
Montana Tunnels	Montana	Apollo Gold Corp.	Gold	Do.
Industrial mineral:				
Florida mines (seven)	Florida	The Mosaic Company	Phosphate rock	Do.
Boron Mine	California	U.S. Borax, Inc.	Boron	Do.
South Pasture	Florida	CF Industries, Inc.	Phosphate rock	Do.
Swift Creek	do.	PCS Phosphate Co., Inc.	do.	Do.
White Rock	do.	Vecellio & Grogan, Inc.	Stone, crushed	Quarry.
F.E.C. Quarry	do.	Rinker Materials Corporation	do.	Do.
Aurora	North Carolina	PCS Phosphate Co., Inc.	Phosphate rock	Open pit.
Georgetown	Texas	Texas Crushed Stone Co., Inc.	Stone, crushed	Quarry.
Balcones Plant	do.	Cemex, Inc.	do.	Do.
Pennsuko Quarry	Florida	Titan Atlantic LLC	do.	Do.
McCook 378	Illinois	Vulcan Materials Co.	do.	Do.
Alico Quarry	Florida	Rinker Materials Corporation	do.	Do.
Thornton Quarry	Illinois	Material Service Corporation	do.	Do.
Ste. Genevieve Quarry	Missouri	Tower Rock Stone Co.	do.	Do.
Mosaic Potash Carlsbad	New Mexico	The Mosaic Company	Potash	Stoping.
Stoneport Quarry	Michigan	Lafarge North America, Inc.	Stone, crushed	Quarry.
OMYA California, Inc.	California	OMYA Industries, Inc.	do.	Do.
Servtex	Texas	Hanson Building Materials America	do.	Do.
TXI Mill Creek Quarry	Oklahoma	Texas Industries, Inc.	do.	Do.
Great Salt Lake Plant	Utah	Great Salt Lake Minerals Corporation	Potash	Pumping/solar evaporation.
Krome Quarry	Florida	Rinker Materials Corporation	Stone, crushed	Quarry.
Dupont Pit	Washington	California Portland Cement Co.	Sand and gravel, construction	Open pit.
Hunter Quarry	Texas	Colorado Materials, Ltd.	Stone, crushed	Quarry.
PBA Quarry	Florida	Palm Beach Aggregates, Inc.	do.	Do.
Port Inland	Michigan	O-N Minerals Co.	do.	Do.

¹List includes private-sector operations only; excludes U.S. Bureau of Land Management and U.S. Forest Service operations.

²Where data are not reported for individual mining operations, ranking is on the basis of production as reported for a group of operations.

³Includes Carlin Mines complex, Lone Tree complex, Midas Mine, Twin Creeks Mine, and Turquoise Ridge Mine; ore was mined from 13 open pits and 4 underground mines.

TABLE 6
MARKETABLE PRODUCT AND ORE TREATED OR SOLD AT SURFACE AND UNDERGROUND MINES
IN THE UNITED STATES IN 2005, BY SELECTED COMMODITY AND STATE¹

(Thousand metric tons)

Commodity or State	Marketable product			Ore treated or sold		
	Surface	Underground	Total	Surface	Underground	Total
Commodity:						
Metal ore:						
Gold	W	W	W	201,000	4,860	206,000
Iron ore, usable	53,200	--	53,200	129,000	--	129,000
Industrial minerals:						
Barite	W	--	W	621	--	621
Clays	41,700	--	41,700	41,700	--	41,700
Diatomite	653	--	653	653	--	653
Feldspar ²	1,450	--	1,450	1,450	--	1,450
Gypsum	19,300	1,850	21,100	19,300	1,850	21,100
Phosphate rock	36,100	--	36,100	151,000	--	151,000
Pumice ³	1,270	--	1,270	1,270	--	1,270
Salt	(4)	43,800	43,800	(5)	45,600	45,600
Sand and gravel:						
Construction	1,270,000	--	1,270,000	1,270,000	--	1,270,000
Industrial	29,900	W	29,900	29,900	W	29,900
Soda ash	--	11,000	11,000	--	11,000	11,000
Stone:						
Crushed	1,610,000	77,200	1,690,000	1,610,000	77,200	1,690,000
Dimension	1,510	(6)	1,510	1,500	(7)	1,500
Talc and pyrophyllite	661	--	661	661	--	661
State:						
Alabama	69,200	(6)	69,200	69,200	(7)	69,200
Alaska	11,800	(6)	11,800	33,900	(7)	33,900
Arizona	98,500	--	98,500	499,000	--	499,000
Arkansas	49,400	(6)	49,400	49,400	(7)	49,400
California	225,000	(6)	225,000	230,000	(7)	230,000
Colorado	58,700	(6)	58,700	79,100	(7)	79,100
Connecticut	18,500	--	18,500	18,500	--	18,500
Delaware	3,790	--	3,790	3,790	--	3,790
Florida	178,000	--	178,000	285,000	--	285,000
Georgia	100,000	1,450	102,000	100,000	1,450	102,000
Hawaii	7,560	--	7,560	7,560	--	7,560
Idaho	29,000	(6)	29,000	38,000	(7)	38,000
Illinois	114,000	4,850	119,000	114,000	4,850	119,000
Indiana	87,500	(6)	87,500	87,500	(7)	87,500
Iowa	51,800	5,730	57,500	51,800	5,730	57,500
Kansas	33,500	3,110	36,600	33,500	3,110	36,600
Kentucky	48,300	22,600	70,900	48,300	22,600	70,900
Louisiana	27,300	12,900	40,100	28,000	13,600	41,600
Maine	15,700	--	15,700	15,700	--	15,700
Maryland	45,800	(6)	45,800	45,800	(7)	45,800
Massachusetts	29,800	--	29,800	29,800	--	29,800
Michigan	116,000	1,630	118,000	141,000	1,830	143,000
Minnesota	107,000	--	107,000	155,000	--	155,000
Mississippi	19,200	--	19,200	19,200	--	19,200
Missouri	112,000	(6)	112,000	84,900	31,500	116,000
Montana	17,900	(6)	17,900	43,000	(7)	43,000
Nebraska	21,400	(6)	21,400	25,400	(7)	25,400
Nevada	64,700	(6)	64,700	235,000	(7)	235,000
New Hampshire	13,500	--	13,500	13,500	--	13,500
New Jersey	45,900	--	45,900	47,700	--	47,700
New Mexico	22,600	(6)	22,600	55,600	(7)	55,600
New York	83,700	6,780	90,500	83,900	6,780	90,700
North Carolina	92,000	--	92,000	98,300	--	98,300

See footnotes at end of table.

TABLE 6—Continued
MARKETABLE PRODUCT AND ORE TREATED OR SOLD AT SURFACE AND UNDERGROUND MINES
IN THE UNITED STATES IN 2005, BY SELECTED COMMODITY AND STATE¹

(Thousand metric tons)

Commodity or State	Marketable product			Ore treated or sold		
	Surface	Underground	Total	Surface	Underground	Total
State—Continued:						
North Dakota	11,400	--	11,400	11,400	--	11,400
Ohio	133,000	(6)	133,000	133,000	(7)	133,000
Oklahoma	63,100	(6)	63,100	63,100	(7)	63,100
Oregon	48,700	--	48,700	48,700	--	48,700
Pennsylvania	116,000	3,670	120,000	116,000	3,670	119,000
Rhode Island	4,310	--	4,310	4,310	--	4,310
South Carolina	47,900	--	47,900	48,000	--	48,000
South Dakota	19,700	--	19,700	21,900	--	21,900
Tennessee	71,800	(6)	71,800	71,800	(7)	71,800
Texas	231,000	(6)	231,000	222,000	9,200	231,000
Utah	46,500	(6)	46,500	95,300	(7)	95,300
Vermont	10,700	(6)	10,700	10,700	(7)	10,700
Virginia	100,000	--	100,000	100,000	--	100,000
Washington	61,700	(6)	61,700	62,600	(7)	62,600
West Virginia	13,300	2,750	16,000	13,300	2,750	16,000
Wisconsin	84,800	(6)	84,800	84,800	(7)	84,800
Wyoming	23,600	9,930	33,500	23,600	9,930	33,500

W Withheld to avoid disclosing company proprietary data. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes aplite.

³Excludes volcanic cinder and scoria; included with "Crushed stone."

⁴Withheld to avoid disclosing company proprietary data; included in "Marketable product, underground."

⁵Withheld to avoid disclosing company proprietary data; included in "Ore treated or sold, underground."

⁶Withheld to avoid disclosing company proprietary data; included in "Marketable product, surface."

⁷Withheld to avoid disclosing company proprietary data; included in "Ore treated or sold, surface."

TABLE 7
MINING METHODS USED AT SURFACE OPERATIONS IN THE UNITED STATES
BY COMMODITY, IN 2005

(Percentage of total material handled)

Commodity	Preceded by drilling and blasting	Not preceded by drilling and blasting ¹
Metal ore:		
Beryllium	100	--
Copper	98	2
Gold	99	1
Gold-silver	100	--
Lead	100	--
Lead-zinc	100	--
Iron	95	5
Magnesium metal	100	--
Molybdenum	100	--
Silver	100	--
Titanium	--	100
Uranium	--	100
Zinc	100	--
Industrial minerals:		
Abrasives	100	--
Barite	8	92
Boron minerals	100	--
Bromine	2	98
Clays	--	100
Diatomite	21	79
Feldspar ²	50	50
Garnet	48	52
Greensand marl	--	100
Gypsum	98	2
Iodine	--	100
Iron oxide pigments	--	100
Kyanite	100	--
Lithium minerals	--	100
Magnesite	100	--
Magnesium compounds	--	100
Mica, scrap	18	82
Olivine	46	54
Perlite	28	72
Phosphate rock	5	95
Potash	--	100
Pumice ³	35	65
Salt	--	100
Sand and gravel:		
Construction	--	100
Industrial	--	100
Stone:		
Crushed	99	1
Dimension	--	100
Talc and pyrophyllite	94	6
Tripoli	61	39
Vermiculite	9	91
Wollastonite	100	--
Zeolites	100	--

-- Zero.

¹Includes drilling and cutting without blasting, dredging, mechanical excavation and nonfloat washing, and other surface mining methods.

²Includes aplite.

³Excludes volcanic cinder and scoria; included with "Crushed stone."

TABLE 8
EXPLORATION ACTIVITY IN THE UNITED STATES IN 2005, BY METHOD, COMMODITY, AND STATE¹

(Meters)

Commodity or State	Churn and diamond drilling	Rotary and reverse circulation drilling	Percussion drilling, other drilling, and trenching	Grand total
Commodity:				
Gold	298,000	812,000	W	1,110,000
Silver	1,510	--	--	1,510
Other ²	24,100	64,000	236,000	325,000
Total	323,000	876,000	236,000	1,440,000
Percentage of grand total	23	61	16	100
State:				
Alaska	1,340	12,300	W	13,600
Montana	1,510	--	--	1,510
Nebraska	--	63,400	--	63,400
Nevada	281,000	795,000	W	1,080,000
Undistributed ³	39,600	5,680	236,000	282,000
Total	323,000	876,000	236,000	1,440,000

W Withheld to avoid disclosing company proprietary data; included with "Other" or "Undistributed." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes boron minerals, diatomite, iron ore, lead, uranium, and commodities indicated by symbol W.

³Includes California, Colorado, Idaho, Minnesota, North Carolina, and States indicated by symbol W.